

**REMARKS**

Claim 1 remains in the present application. Claims 2 - 22 have been cancelled. Based on the remarks herein, Applicant respectfully requests that the Examiner reconsider and withdraw all outstanding rejections.

Claim 1 was rejected under 35 U.S.C 102(b) as being anticipated by Lee et al. Applicant respectfully submits the method in cited published paper is quite different from the rate-1 space frequency block code claimed in claim 1 and set forth in painstaking detail in the present application. Applicant submits that at least the following are significant differences between the cited published paper and the present application:

(1) The present application's SFBC can achieve rate-1 for arbitrary number of transmit antenna case, but the method in cited paper can only achieve rate-1 for 2 transmit antenna case. There is because the cited paper uses existing space time block codes to do space-frequency encoding. And space time block codes can only have rate  $\frac{1}{4}$  at most for transmit antenna number greater than 2;

(2) The present application's SFBC can exploit the frequency selectivity inherent in the channel, which the cited art method can not thereby distinguishing the rate-1, space-frequency block code.

(3) The present application's SFBC can achieve full space-frequency diversity of  $M*N*L$ , where M is number of transmit antenna, N is number of receiver antenna, L is order of frequency selective channel, but their method can only achieve diversity order of  $2*N$ .

In short, as long as the channel is frequency selective and/or the number of transmit antenna need to be larger than 2, our SFBC is significantly distinguishable and better than the method in cited paper.

**CONCLUSION**

For at least the foregoing reasons, Applicants submit that the rejections have been overcome. Therefore, claim 1 is in condition for allowance and such action is earnestly solicited. The Examiner is respectfully requested to contact the undersigned by telephone if such contact would further the examination of the present application. Please charge any shortages and credit any overcharges to our Deposit Account number 02-2666.

Respectfully submitted,  
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